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ABSTRACT

A model was developed of the choice-making behavior of students participating in postsecondary occupational education. The model was estimated empirically with data from a national survey of public or nonprofit institutions that offer such education, conducted in spring 1987. The survey involved 432 institutions and 3,330 students. Data were gathered in regard to students' choice of type of institution, program of study, part- or full-time status, type of degree, intention to compete, grades earned, education and training background, previous and current work experience, tuition and cost issues, institutional placement rate, location, and student characteristics. The model was estimated using ordinary least squares regression analysis for the following choices: enrolled in a community/junior college program; enrolled in a technical institute; enrolled in a business and office program; enrolled in a trade and industrial program; enrolled part time; working toward a vocational certificate; and current grade point average. The findings from the various choice-making models demonstrate many systematic relationships between students' educational backgrounds or motivating influences and their choices. The models suggest that the instruction at vocational-technical institutes differs from either community/junior colleges or university/college programs. The findings seem to substantiate the assumed behavior of seeking information and making rational choices. The findings of the study support the suggested model of choice-making behavior to the extent that the data adequately represent such behavior. Additional research and data collection need to be done to improve understanding of choice-making behavior. (The questionnaire is appended.) (KC)

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A MODEL OF POSTSECONDARY AND ADULT STUDENT CHOICE BEHAVIOR

by

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A MODEL OF POSTSECONDARY AND ADULT STUDENT CHOICE BEHAVIOR

Introduction

As individuals progress through their educational experiences beyond the elementary and secondary levels, they must make many choices. These choices include a specific institution, a program of study, course selection and sequencing, and part- or full-time attendance. The time and effort that students bring to their educational pursuits are also a matter of choice. Individuals differ with respect to how they make such choices. Some individuals may invest considerable time and effort into their choice-making behavior through collection and analysis of extensive information. Other individuals may allow their choices to be made for them.

The purpose of this paper is to present a model of the choice-making behavior of students participating in postsecondary occupational education. The model is estimated empirically with data from a national survey of public or nonprofit institutions that offer such education. This survey was conducted in spring 1987 by the Center on Education and Training for Employment, formerly the National Center for Research in Vocational Education at The Ohio State University. At each institution that was surveyed, individuals occupying the following roles were asked to respond:

- Administrator
- Placement Director
- 2 Department Chairs
- 4 Faculty
- 12 Students

The completed sample size is 432 institutions and 3,330 students.[1]

It is important to understand the basis of choice behavior of adult and postsecondary education students for many reasons. Institutions and programs that are competing for students need to know what factors are important in attracting students and in retaining them. Guidance staff need to understand student choice-making behavior in order to provide the most useful information

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[1]See K. Hollenbeck, "Data Collection Procedures and Response," in Postsecondary Occupational Education Delivery: An Examination, by K. Hollenbeck, J. Belcher, G. Dean, B. Rider, and C. Warmbrod (Columbus: The National Center for Research in Vocational Education, The Ohio State University, December 1987), pp 2-1 to 2-29.

for the individuals they are counseling. Faculty need to understand the substantive expectations and goals that students have in order to tailor instructional delivery and course content. Finally, it is to the students' advantage to understand choice making so that mistakes and false starts can be minimized.

A Model of Student Choice Behavior

The underlying behavioral framework for this study is one of rationality. The model suggests that individuals gather information about alternatives and select the course of action that maximizes net benefits (that is, benefits minus costs). The model can be represented heuristically as follows:

(1) Choice = f(Education and training background, Previous and current work experience, Motivation, Occupational goals, Tuition and costs, Institutional placement rates, Location, Personal characteristics, and Other)

The items in the domain of the choice function are really groups of variables, or variable blocks. The structural equation presented in (1) represents essentially a human capital model.[2] Occupational goals represent the benefits to be derived from the action, whereas variables such as tuition, location, or personal characteristics such as family status represent costs. According to the model, individuals will select those choices that maximize their expected returns.

Of course, all choices are made in an environment of uncertainty and with limited information. It is assumed that individuals will collect more information for choices that involve larger costs or have larger payoffs. That is, the act of collecting and analyzing information pertinent to a choice and the selection of information to examine are themselves economic choices that involve costs and benefits.

Data

The survey of students that was conducted as part of the Center's survey of postsecondary occupational education institutions has numerous variables that coincide with the variable blocks that comprise the model represented by (1). The characteristics of the students' current educational activities that represent choices include type of institution, program of study,

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[2]Gary Becker, Human Capital, 2 ed. (Chicago: University of Chicago Press, 1975).

part- or full-time status, type of degree--vocational certificate or associate's degree, intention to complete, and grades earned (assumed to proxy for effort.) The data on education and training background include type of high school (public, parochial, or private nonparochial), prior attendance at another postsecondary institution, prior postsecondary degree earned, and prior enrollment in developmental education courses.

Previous and current work experience is represented by whether the individual is currently employed, and if so, the hours per week and hourly wage being earned. A number of variables proxy for motivation--high school grades, effort in high school, number of extracurricular activities in high school, the hours per week spent in preparing for current courses, and postsecondary extracurricular activities.

The survey did not collect specific information about occupational goals. However, it is suggested that two variables that are available from the data are indicative of the intensity with which occupational goals are held. Among the items that students could identify as factors that influenced their choice of institution were "reputation of the institution for providing high-quality education and training" and "it is the only institution in my state that offers the program I'm interested in."

Tuition and costs issues are represented by "chose institution for cost considerations," "chose institution for financial aid," whether or not the respondent is receiving financial aid, and whether or not the respondent has received a loan to cover educational expenses. All of these variables represent direct evidence as to the extent to which the respondents placed emphasis on costs or financial aid availability in making their choices.

Another factor that the students could represent as influencing their choice of institution was "its high placement rate." On the other hand, the survey also asked for level of agreement with the statement that "this institution doesn't place as many students as they advertise." Responses to these two items comprise the institutional placement rate variable block. The importance of location in institutional choice is measured by location as a factor in choosing the current institution as well as the extent to which the respondents' choices were influenced by a friend/acquaintance.

A number of characteristics were used for the personal characteristics--age, gender, ethnicity, marital status, handicapped status, and family income class. Finally, a residual category of other was included. Six factors were included in that set of variables--"chose institution because of guidance counselor," "chose institution based on its catalog," "chose institution on parents' advice," "chose institution because of prior teacher recommendation," and level of agreement with the statements

"institution is more difficult than high school" and "faculty cares about students."

Table 1 provides the (unconditional) means and standard deviations of all these variables. It also provides a reference to the particular survey questions from which the variables were derived. The appendix to this paper provides a copy of the student survey form. The profile of students that is presented in the table shows that slightly over half of the students chose to attend occupational programs at community/junior colleges, around 30 percent at technical institutes, and under 20 percent at university/colleges. About 30 percent of the students were in business and office programs (classification of instructional programs (CIP) codes 06 and 07). These programs include secretarial and accounting. About one-sixth of the students were in trade and industrial programs (CIP codes 46-48). Only 4 percent of the students were undecided about a program of study.

A little over three-quarters of the students reported that they were enrolled on a full-time basis, and about 93 percent of all the students reported that they intended to complete the programs in which they were enrolled. Slightly more than one-third of the students indicated that they had previously attended another postsecondary institution; about one-quarter of those (that is, about 10 percent of the total sample) had received a degree. Just over 35 percent of the students had taken at least one developmental English course and a similar percentage had taken developmental math. About one-tenth of the sample had taken a course on study skills or a developmental science course.

Almost 90 percent of the students reported that they had attended public high schools. About one-third of the entire sample reported a college preparatory curriculum in high school, about half reported a general curriculum, and about one-sixth had been in a vocational course of study. The average reported GPA in high school was a B- and the average number of hours per week of homework was 3.6. As high school students, the sample respondents had participated in an average of 3.2 different types of extracurricular activities.

According to the students, the primary reasons for choosing their current institutions were, in descending order of importance, location, cost reasons, high quality of education and training, and friends. Just over half of the students reported having received financial aid and about one-quarter had received a loan.

Finally, among the personal characteristics of the students, the survey showed that the average age of the students was over 27 years old, a little over half of them were women, about 80 percent were white, and about 30 percent were or had been married. The average family income was about $19,000 (1987 dollars). Just under 10 percent of the students reported a physical handicap.

TABLE 1

MEAN AND STANDARD DEVIATION
OF MODEL VARIABLES

Variable	n	Mean	Standard Deviation	Survey Question
Choices				
Community/Junior College	3330	.520	.500	2.
Technical Institute	3330	.308	.462	2.
College/University	3330	.171	.376	2.
Business & Office[a]	3330	.304	.460	3.
Trade & Industrial[b]	3330	.167	.373	3.
Undecided	3330	.041	.199	3.
Full-time enrollment	3330	.759	.428	21.
Part-time enrollment	3264	.201	.401	21.
Vocational certificate	3194	.297	.457	31.
Associate degree	3330	.466	.499	31.
Plan to complete	3330	.933	.250	37.
Current grades	3243	3.352	.629	28.
Education and training background				
Public high school	3330	.878	.328	12.(b)
Parochial high School	3330	.069	.253	12.(b)
Private, nonparochial h.s.	3330	.019	.135	12.(b)
College prep curriculum	3330	.321	.467	14.
General curriculum	3330	.494	.500	14.
Vocational curriculum	3330	.174	.379	14.
Prior postsec. attendance	3330	.367	.482	38.
Prior postsec. degree	3330	.099	.298	42.
Developmental English in current institution	3330	.368	.482	27.(a)
Developmental math	3330	.371	.483	27.(b)
Course on study skills	3330	.113	.317	27.(c)
Developmental science	3330	.105	.307	27.(d)
Work experience				
Currently employed	3330	.556	.497	49.
Current hours/week	2961	16.793	17.263	53.
Hourly wage	1761	6.096	4.184	54.
Motivation				
High school grades	3330	2.863	.726	15.
High school effort[c]	3303	4.774	1.296	16.
High school extracurriculars[d]	3330	3.211	2.288	17.
Hours/week of preparation for each course[e]	3330	6.905	7.554	29.
Postsecondary extracurriculars[f]	3330	.722	1.121	32.

TABLE 1--Continued

Variable	n	Mean	Standard Deviation	Survey Question
Occupational goals				
Chose institution for high quality e & t[g]	3330	1.326	1.602	20.(g)
Chose institution because only one w/program[g]	3330	.367	1.054	20.(k)
Tuition				
Chose institution for cost reasons[g]	3330	1.430	1.484	20.(i)
Chose institution because of financial aid[g]	3330	.630	1.194	20.(j)
Receiving financial aid	3330	.541	.498	26.
Received loan	3330	.266	.442	25.
Institutional placement rates				
Chose institution because of high placement[g]	3330	.594	1.149	20.(h)
Institution doesn't place as many as they advertise[h]	3000	2.078	.845	36.(e)
Location				
Chose institution because of location[g]	3330	2.206	1.617	20.(e)
Chose institution because of friend/acquaintance[g]	3330	1.116	1.491	20.(d)
Personal characteristics				
Age	3308	27.287	9.393	4.
Female	3309	.516	.500	5.
White	3330	.801	.399	6.
Married	3330	.311	.463	8.
Handicapped	3330	.095	.293	67.
Family income class	3168	4.390	2.379	68.
Other				
Chose institution because of guidance counselor[g]	3330	.309	.922	20.(a)
Chose institution based on catalog[g]	3330	.648	1.180	20.(b)
Chose institution on parent's advice[g]	3330	.667	1.287	20.(c)
Chose institution because of prior teacher[g]	3330	.264	.856	20.(d)
Institution is more difficult than high school[h]	3243	2.945	.871	36.(a)
Faculty care about students[h]	3276	3.449	.651	36.(b)

TABLE 1--Continued

[a]CIP codes 06 and 07.

[b]CIP codes 46, 47, and 48.

[c]Question was phased, "In high school, approximately how much time did you spend on homework per week?" Response categories ranged from 1 (no homework was ever assigned) to 8 (15+ hours). Mean of 4.8 can be interpolated to 3.6 hours/week.

[d]Question 17 on student survey lists 12 extracurricular activities and this variable is the number of activities for which respondent indicated participation.

[e]Question was phased, "About how much time do you spend preparing for (course name) each week?"

[f]Question 32 on student survey lists nine activities and this variable is the number for which respondent indicated participation.

[g]Respondents ranked 4 most important factors (out of 11) that influenced them to choose this institution. Responses range from 0 (not ranked) to 4 (most important).

[h]Responses ranged from 1 (strongly disagree) to 4 (strongly agree).

Results

The model presented in equation (1) was estimated using ordinary least squares regression analysis for the following choices:

- Enrolled in a community/junior college program
- Enrolled in a technical institute program
- Enrolled in a business and office program
- Enrolled in a trade and industrial program
- Enrolled in a program on a part-time basis
- Working toward a vocational certificate
- Current grade point average (assumed to indicate choice of effort)

Estimates using the variables "intend to complete current program" and "undecided on program choice" resulted in low R-squareds and were unstable under alternative specifications. They were omitted from this study.

Institution Type

Tables 2 and 3 present estimates for models of the choice of type of institution. The first set of estimates is for choosing to enroll in a community/junior college program and the second is for choosing to enroll in a technical institute program.[3] Although they were estimated independently, it is recognized that the choices are not independent. If a characteristic is positively related to the decision to enroll in a community/junior college, then it is likely to be related negatively to enrollment in a vocational-technical institute. This is not absolutely the case, because there is a third type of institutional context for occupational education, namely programs that are operated at university/colleges. Recall that a little over 15 percent of the sample was in such programs.

To interpret the size of the effects presented in the table, the coefficient should be compared to the dependent variable mean. In table 2, the mean is .53, so a coefficient that is around .025 represents a 5 percent effect and a coefficient of .05 represents a 10 percent effect, and so forth. A few of the variables were scaled for presentation purposes. For example, in table 2 student age is divided by 10, so the .05 coefficient represents an effect size for 10 years of age.

Cost and location are significant factors in the decision to

[3]See K. Hollenbeck, "Data Collection Procedures. . .," for the definition that was used for these types of institutions.

TABLE 2

ESTIMATES FROM A MODEL OF CHOOSING
TO ATTEND AN OCCUPATIONAL PROGRAM IN
A COMMUNITY/JUNIOR COLLEGE

Variable[a]	Estimate	t-ratio
Education and training background		
Public high school	-.01	-.24
College prep. curriculum	-.03	-1.25
Vocational curriculum	-.00	-.10
Prior postsec. attendance	-.02	-.95
Prior postsec. degree	.01	.16
Developmental English	.06***	2.71
Developmental math	-.07***	-3.35
Course on study skills	.00	.02
Developmental science	-.00	-.03
Work experience		
Currently employed	.04	1.52
Hourly wage ÷ 100[b]	.73**	2.48
Motivation		
High school grades	-.02	-1.06
High school effort	-.01	-1.63
High school extracurriculars	-.00	-.71
Hours/week of preparation for each course ÷ 100[b]	-.57***	-4.69
Postsecondary activities	-.00	-.40
Occupational goals		
Chose institution for high-quality e & t	-.01**	-2.19
Chose institution because only one w/program	.01	1.20
Tuition		
Chose institution for cost reasons	.02***	3.37
Chose institution for financial aid	.02**	2.33
Receiving financial aid	-.02	-1.06
Received loan	-.04**	-1.74
Institutional placement rate		
Chose institution because of high placement	-.03**	-3.09
Institution doesn't place as many as they advertise	.01	.92
Location		
Chose institution because of location	.02***	3.81
Chose institution because of friend/acquaint.	-.01*	-1.95

TABLE 2--Continued

Variable	Estimate	t-ratio
Personal characteristics		
Age ÷ 10[b]	.05***	3.81
Female	.05**	2.40
White	-.07***	-2.98
Married	-.03	-1.27
Handicapped	-.01	-.31
Family income	.00	.89
Other		
Chose institution because of guidance counselor	.01*	1.22
Chose institution based on catalog	.01*	1.69
Chose institution on parent's advice	-.00	-.34
Chose institution because of prior teacher	-.01	-1.13
Institution is more difficult than high school	.04***	3.58
Faculty cares about students	-.01	-.92
Mean of dependent variable	.530	
Sample size	2972	
Adjusted R-squared	.0651	

[a]Variables defined in table 1.
[b]Variable was scaled for presentation purposes only.

*Significant at the .10 level (two-tail test).
**Significant at the .05 level.
***Significant at the .01 level.

TABLE 3

ESTIMATES FROM A MODEL OF CHOOSING
TO ATTEND AN OCCUPATIONAL PROGRAM IN
A VOCATIONAL-TECHNICAL INSTITUTE

Variable[a]	Estimate	t-ratio
Education and training background		
Public high school	.06**	2.38
College prep. curriculum	-.02	-1.01
Vocational curriculum	.03	1.27
Prior postsec. attendance	.00	.02
Prior postsec. degree	-.05*	-1.78
Developmental English	-.09***	-4.67
Developmental math	.10***	5.55
Course on study skills	-.04	-1.50
Developmental science	-.06**	-2.22
Work experience		
Currently employed	-.06**	2.89
Hourly wage ÷ 100	-.17	-.70
Motivation		
High school grades	-.01	-.92
High school effort	-.00	-.18
High school extracurriculars	-.00	-.64
Hours/week of preparation for each course ÷ 100	.76***	7.17
Postsecondary activities	-.01**	-2.34
Occupational goals		
Chose institution for high-quality e & t	-.00	-.92
Chose institution because only one w/program	-.02***	-2.88
Tuition		
Chose institution for cost reasons	.01	.93
Chose institution for financial aid	-.02**	-2.35
Receiving financial aid	.01	.60
Received loan	-.08***	-4.24
Institutional placement rate		
Chose institution because of high placement	.05***	6.96
Institution doesn't place as many as they advertise	-.02**	-2.03
Location		
Chose institution because of location	-.03***	-6.27
Chose institution because of friend/acquaint.	.00	.79

TABLE 3--Continued

Variable	Estimate	t-ratio
Personal characteristics		
Age ÷ 10[b]	-.00	-.27
Female	-.04**	-2.50
White	.07***	3.45
Married	.04**	2.07
Handicapped	-.04*	-1.40
Family income	-.02***	-5.91
Other		
Chose institution because of guidance counselor	-.02*	-1.83
Chose institution based on catalog	-.01	-.85
Chose institution on parent's advice	-.01	-.89
Chose institution because of prior teacher	.01	.81
Institution is more difficult than high school	-.11***	-11.73
Faculty cares about students	.04***	3.23
Mean of dependent variable	.294	
Sample size	2972	
Adjusted R-squared	.1614	

[a]Variables defined in table 1.
[b]Variable was scaled for presentation purposes only.

*Significant at the .10 level (two-tail test).
**Significant at the .05 level.
***Significant at the .01 level.

enroll in a community/junior college. "Chose institution for cost reasons," "chose institution for financial aid," and "chose institution because of location" were all positive and significant in table 2. College catalogs also tended to influence students to enroll in community/junior colleges. On the other hand, high placement rates and the quality of education and training are negatively related to this institution type. The interpretation of these results is that individuals who were most influenced by cost considerations, financial aid, location, and catalogs in their choice of institutions tended to choose community/junior colleges. Individuals who were most influenced by placement rates and quality of training in their choice of institution type chose not to enroll in community/junior colleges.

Table 3 shows that individuals that were influenced by high placement rates tended to choose vocational-technical institutes and individuals that were influenced by financial aid, location, and guidance advice tended not to choose such institutions. It is interesting to note that individuals who reported that they "chose institution because it is the only one in the state with that program" also tended not to enroll in technical institute programs.

The estimates presented in the two tables allow us to infer that the factors that influenced enrollment in occupational programs in university/college settings were high-quality education and training and program uniqueness in the state. Furthermore, individuals influenced by cost considerations did not enroll in university/colleges.

The tables also show that older students, women, and minorities tended to choose community/junior colleges. Furthermore, students that were currently employed were more likely to have chosen programs at community/junior colleges. All of these factors, except for age, tend to be related negatively to the likelihood of being enrolled in a vocational-technical institute. The statistically insignificant effect of age in the vocational-technical institute equation suggests that younger students have tended to choose university/college programs.

The sign reversal on the developmental English and math course variables in the tables suggest that community/junior college students tended to have taken developmental English and vocational-technical institute students tended to have taken developmental math. Individuals that agreed with the statement that they were finding their current program to be more difficult than high school tended to be enrolled in community/junior colleges and individuals that disagreed with the statement tended to be in the vocational-technical institutes. Nevertheless, preparation outside of class was positively related to vocational-technical institute enrollment and negatively related to community/junior college enrollment. Under the assumptions of the model (namely that ability is no different), this result suggests that

vocational-technical institute students find their courses to be easier than high school, and yet they spend relatively more time in preparing for classes. Community/junior college students find their courses to be more difficult than high school, and yet they spend relatively less time in course preparation. Finally, the vocational-technical institute students reported a caring faculty.

Choice of Program

To examine program choice-making behavior, enrollment into (a) business and office and (b) trade and industrial programs are examined. Again, these choices are not independent; however, in this case, over half of the sample had chosen neither. Therefore it is less likely to be the case that the signs on the estimated coefficients will be reversed. These two programs were chosen because they are the largest in terms of enrollment and because they are programs that are available at all institution types.

Tables 4 and 5 present the estimated coefficients for the two models. As might be expected, the statistically strongest relationships are between gender and these program choices--females in business and office, males in trade and industrial.[4] In looking at the educational backgrounds of the students, table 4 shows that individuals with a college prep curriculum were less likely to choose a business and office program, whereas individuals that had higher grade point averages in high school and individuals that reported spending more time on homework in high school had chosen business and office programs.

Among the explicit factors that had influenced their choice of institutions, individuals that cited cost considerations, financial aid, location, and parental advice tended to enroll in business and office programs. Individuals that cited guidance counselor advice and program uniqueness as influential factors tended not to choose business and office programs. Having taken developmental English courses is positively related to enrollment in business and office, whereas having taken developmental science is negatively related. Finally, individuals in business and office programs tended to agree with the statement that the institutions they were attending do not place as many students as they advertise and tended to agree that their course work was more difficult than high school.

The individuals who had chosen trade and industrial programs tended not to be motivated by cost considerations. Nor were they influenced by the placement rate of the institution. The only factor that is positively related to this program choice is "chose

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[4]An advantage to regression analysis is that the estimates of the other effects control for this gender difference.

TABLE 4

ESTIMATES FROM A MODEL OF CHOOSING TO PURSUE A BUSINESS AND OFFICE OCCUPATIONAL PROGRAM

Variable[a]	Estimate	t-ratio
Education and training background		
Public high school	.02	.86
College prep. curriculum	-.06***	-3.36
Vocational curriculum	-.01	-.55
Prior postsec. attendance	-.01	-.71
Prior postsec. degree	-.01	-.29
Developmental English	.11***	5.76
Developmental math	-.01	-.42
Course on study skills	-.01	-.54
Developmental science	-.12***	-4.54
Work experience		
Currently employed	.01	.30
Hourly wage ÷ 100[b]	-.10	-.40
Motivation		
High school grades	.03***	2.63
High school effort	.03***	4.13
High school extracurriculars	-.01	-1.43
Hours/week of preparation for each course ÷ 100[b]	-.18*	-1.77
Postsecondary activities	-.01	-.91
Occupational goals		
Chose institution for high-quality e & t	-.01	-1.04
Chose institution because only one w/program	-.03***	-3.87
Tuition		
Chose institution for cost reasons	.02***	3.40
Chose institution for financial aid	.02***	2.72
Receiving financial aid	.03*	1.76
Received loan	-.02	-.89
Institutional placement rate		
Chose institution because of high placement	-.00	-.43
Institution doesn't place as many as they advertise	.02*	1.72
Location		
Chose institution because of location	.02***	4.01
Chose institution because of friend/acquaint.	.01	1.10

TABLE 4--Continued

Variable	Estimate	t-ratio
Personal characteristics		
Age ÷ 10[b]	.00	.24
Female	.36***	22.42
White	-.02	-1.03
Married	-.01	-.69
Handicapped	.04	1.56
Family income	-.00	-.08
Other		
Chose institution because of guidance counselor	-.02**	-2.21
Chose institution based on catalog	-.00	-.72
Chose institution on parent's advice	.01*	1.76
Chose institution because of prior teacher	-.01	-1.07
Institution is more difficult than high school	.02**	2.02
Faculty cares about students	.01	1.18
Mean of dependent variable	.311	
Sample size	2972	
Adjusted R-squared	.2317	

[a]Variables defined in table 1.
[b]Variable was scaled for presentation purposes only.

*Significant at the .10 level (two-tail test).
**Significant at the .05 level.
***Significant at the .01 level.

TABLE 5

ESTIMATES FROM A MODEL OF CHOOSING
TO PURSUE A TRADE AND INDUSTRIAL
OCCUPATIONAL PROGRAM

Variable[a]	Estimate	t-ratio
Education and training background		
Public high school	.03	.77
College prep. curriculum	-.07***	-5.14
Vocational curriculum	.04**	2.54
Prior postsec. attendance	-.05***	-3.73
Prior postsec. degree	.02	.83
Developmental English	-.07***	-4.54
Developmental math	.05***	3.65
Course on study skills	-.06***	-3.15
Developmental science	-.04**	-2.22
Work experience		
Currently employed	-.04**	-2.18
Hourly wage ÷ 100[b]	.46**	2.35
Motivation		
High school grades	-.05***	-5.09
High school effort	-.01**	-2.37
High school extracurriculars	-.00	-.02
Hours/week of preparation for each course ÷ 100[b]	-.06	-.77
Postsecondary activities	-.00	-.41
Occupational goals		
Chose institution for high-quality e & t	.01***	2.76
Chose institution because only one w/program	.01	1.42
Tuition		
Chose institution for cost reasons	-.01***	-2.77
Chose institution for financial aid	.00	.43
Receiving financial aid	-.02	-1.17
Received loan	-.01	-.65
Institutional placement rate		
Chose institution because of high placement	-.01*	-1.77
Institution doesn't place as many as they advertise	-.00	-.26
Location		
Chose institution because of location	-.01*	-1.83
Chose institution because of friend/acquaint.	.01	1.35

TABLE 5--Continued

Variable	Estimate	t-ratio
Personal characteristics		
Age ÷ 10[b]	-.00	-.44
Female	-.25***	-20.02
White	-.02	-1.15
Married	.01	.95
Handicapped	-.04*	-1.80
Family income	-.01***	-3.16
Other		
Chose institution because of guidance counselor	-.00	-.49
Chose institution based on catalog	-.01	-1.37
Chose institution on parent's advice	.00	.04
Chose institution because of prior teacher	.00	.35
Institution is more difficult than high school	-.06***	-8.63
Faculty cares about students	.01	1.44
Mean of dependent variable	.161	
Sample size	2972	
Adjusted R-squared	.2430	

[a]Variables defined in table 1.
[b]Variable was scaled for presentation purposes only.

*Significant at the .10 level (two-tail test).
**Significant at the .05 level.
***Significant at the .01 level.

institution for high quality education and training." The lack of influence of cost is somewhat puzzling because these individuals come from lower family income classes and are relatively less likely to be currently employed. However, if they are employed, they tend to have relatively high wage rates.

The educational experiences of individuals that chose trade and industrial programs were strongly related to their choice of program. In high school, they tended to have been in a vocational curriculum, to have lower grades, and to report less time spent on homework. Furthermore, individuals who had been enrolled in another postsecondary institution tended not to choose trade and industrial programs. At their current institution, they were likely to have taken a developmental math course, but were unlikely to have taken developmental English, science, or study skills. Finally, these individuals disagreed with the statement that their course work was more difficult than high school.

Part-time Attendance

Table 6 provides estimates for a model of choosing to attend an occupational program on a part-time basis. Theoretically, it may be supposed that a major reason for part-time attendance is of an economic nature. Individuals are currently employed and have major financial commitments and have thus decided to maintain their employment and pursue education on a part-time basis. As such, institutional choice for these individuals is less driven by economic factors. Indeed, the estimates show that individuals who reported that financial aid or high placement rates had influenced their choice of institution tended not to be part-time students. Rather it is students who were motivated by location or who are currently employed and who have relatively high hourly wages that have chosen the part-time status. Concomitantly, individuals that reported receiving a loan or financial aid have not chosen to attend on a part-time basis.

Primary factors other than employment status that explain part-time status are personal characteristics. For example, older students, women, minorities, and married students were all more likely to be part-time students than were students with the opposite characteristics. Interestingly, students who had taken a college prep curriculum or who had taken a vocational curriculum in high school tended to be part-time students. From this, it might be inferred that part-time students are more directed in their educational goals and aspirations than say, individuals in a general curriculum at the secondary level. Note that extracurricular activities in high school are negatively related to the likelihood of being a part-time student as well. Finally, the amount of time that students spend outside of class in preparation is also negatively associated with part-time enrollment.

TABLE 6

ESTIMATES FROM A MODEL OF CHOOSING TO ATTEND AN OCCUPATIONAL PROGRAM ON A PART-TIME BASIS

Variable[a]	Estimate	t-ratio
Education and training background		
Public high school	.02	1.01
College prep. curriculum	.02***	2.59
Vocational curriculum	.03*	1.70
Prior postsec. attendance	.01	.96
Prior postsec. degree	.03	1.35
Developmental English	-.03*	-1.81
Developmental math	-.05***	-2.89
Course on how to study	.00	.02
Developmental science	.02	.97
Work experience		
Currently employed	.03*	1.81
Hourly wage ÷ 100[b]	1.52***	7.17
Motivation		
High school grades	.01	1.29
High school effort	-.00	-.79
High school extracurriculars	-.01***	-2.67
Hours/week of preparation for each course ÷ 100[b]	-.48***	-5.45
Postsecondary activities	-.01	-1.25
Occupational goals		
Chose institution for high-quality e & t	-.00	-.13
Chose institution because only one w/program	-.00	-.27
Tuition		
Chose institution for cost reasons	.00	.08
Chose institution for financial aid	-.01**	-2.04
Receiving financial aid	-.12***	-7.81
Received loan	-.08***	-5.05
Institutional placement rate		
Chose institution because of high placement	-.02***	-2.85
Institution doesn't place as many as they advertise	.01	1.25
Location		
Chose institution because of location	.01*	1.78
Chose institution because of friend/acquaint.	-.00	-.61

TABLE 6--Continued

Variable	Estimate	t-ratio
Personal characteristics		
Age ÷ 10[b]	.08***	9.31
Female	.03**	2.32
White	-.03*	-1.95
Married	.08***	5.27
Handicapped	-.02	-.90
Family income	-.00	-.48
Other		
Chose institution because of guidance counselor	.01**	2.24
Chose institution based on catalog	.01	1.11
Chose institution on parent's advice	-.02**	-2.10
Chose institution because of prior teacher	.00	.31
Institution is more difficult than high school	-.01	-1.09
Faculty cares about students	-.00	-.18
Mean of dependent variable	.193	
Sample size	2972	
Adjusted R-squared	.2169	

[a]Variables defined in table 1.
[b]Variable was scaled for presentation purposes only.

*Significant at the .10 level (two-tail test).
**Significant at the .05 level.
***Significant at the .01 level.

Degree Type

Coincidental with the process of choosing a specific institution to attend and a program of study to follow is the selection of type of degree to pursue. At the postsecondary occupational education level, the primary choice is between pursuing an associate's degree or a vocational certificate. The latter is typically the credential that is earned from a program that lasts one year and requires few "outside" courses. Programs at vocational-technical institutes typically offer this degree. An associate's degree, on the other hand, is typically bestowed for a 2-year program that includes general course requirements in addition to a technical field. Community/junior college programs typically lead to the associate's degree.

Table 7 provides estimates from a model that explains choosing to pursue a vocational certificate. Because programs that lead to a vocational certificate are of shorter duration, it stands to reason that students would be less interested in cost considerations and more interested in the institution's placement record. Indeed, the parameter estimates presented in the table are consistent with this reasoning. Individuals who had been influenced by high placement rates in choosing an institution had a higher likelihood of pursuing a vocational certificate. Individuals who had received financial aid or had received a loan for their educational expenses tended not to be pursuing a vocational certificate.

In terms of educational background, attendance at public high schools is positively related to the likelihood of pursuing a vocational certificate, whereas grades in high school and having taken a college preparatory curriculum were negatively related. As was the case for choosing to attend a vocational-technical institute, individuals who disagreed with the statement that their course work is more difficult than in high school tended to be pursuing a vocational certificate. Finally, among personal characteristics, men and students with lower levels of family income tended to choose to pursue a vocational certificate.

Current Grades

The final choice that is examined in this study is current grade level, which is assumed to be a proxy for effort. That is, it is assumed that grades are positively related to time and effort and that students make choices about how much time and effort to put into their courses. Table 8 provides the estimates from this model.

Older students and married students tend to have higher grade points, whereas minorities, handicapped, and students from lower income levels tend to have lower grade points. High school grades

TABLE 7

ESTIMATES FROM A MODEL OF CHOOSING
TO PURSUE A VOCATIONAL CERTIFICATE

Variable[a]	Estimate	t-ratio
Education and training background		
Public high school	.05*	1.93
College prep. curriculum	-.09***	-4.72
Vocational curriculum	.02	1.02
Prior postsec. attendance	-.02	-1.22
Prior postsec. degree	-.02	-.56
Developmental English	-.11***	-6.02
Developmental math	.11***	6.10
Course on how to study	-.05**	-2.22
Developmental science	-.06**	-2.18
Work experience		
Currently employed	-.05**	-2.38
Hourly wage ÷ 100[b]	-.21	-.84
Motivation		
High school grades	-.03**	-2.46
High school effort	-.01	-1.44
High school extracurriculars	.00	.05
Hours/week of preparation for each course ÷ 100[b]	.54***	5.24
Postsecondary activities	-.02**	-2.06
Occupational goals		
Chose institution for high-quality e & t	-.00	-.31
Chose institution because only one w/program	.00	.15
Tuition		
Chose institution for cost reasons	-.00	-.32
Chose institution for financial aid	-.00	-.71
Receiving financial aid	-.04**	-2.03
Received loan	-.05***	-2.91
Institutional placement rate		
Chose institution because of high placement	.03***	3.77
Institution doesn't place as many as they advertise	-.03**	-2.76
Location		
Chose institution because of location	-.02***	-3.45
Chose institution because of friends/acquaint.	.01**	2.36

TABLE 7--Continued

Variable	Estimate	t-ratio
Personal characteristics		
Age ÷ 10[b]	-.01	-.55
Female	-.05***	-3.22
White	.02	.91
Married	.01	.81
Handicapped	-.01	-.31
Family income	-.03***	-8.10
Other		
Chose institution because of guidance counselor	-.00	-.48
Chose institution based on catalog	-.00	-.30
Chose institution on parent's advice	-.01	-1.21
Chose institution because of prior teacher	.01	1.20
Institution is more difficult than high school	-.10***	-11.49
Faculty cares about students	.04***	3.37
Mean of dependent variable	.278	
Sample size	2972	
Adjusted R-squared	.1691	

[a]Variables defined in table 1.
[b]Variable was scaled for presentation purposes only.

*Significant at the .10 level (two-tail test).
**Significant at the .05 level.
***Significant at the .01 level.

are highly correlated with postsecondary grades as would be expected. Interestingly, high school effort and number of extracurriculars in high school are negatively related to current grade point, whereas effort on current courses and number of activities at the postsecondary level are positively associated with current grade point. Individuals who had earned a degree in a prior postsecondary setting also tended to have higher grades.

Very few of the explicit influences on institution choice are related to current grades. Having chosen the institution because it is the only one in the state is positively associated with grades. Individuals who had been influenced by guidance counselor advice or parental advice tended not to earn good grades in their current educational endeavors.

The estimates in the table suggest that financial aid is a positive factor on grades, whereas current employment and having taken out a loan are negative factors.

Discussion

The findings from the various choice-making models that are presented in this paper demonstrate many systematic relationships between students' educational backgrounds or motivating influences and their choices. This is true for the choice of institution type, the choice of occupational program, the choice of enrolling on a part-time basis, the choice of degree to pursue, and the choice of time and effort invested into current program (as proxied by current GPA).

Individuals who are influenced most by cost considerations, availability of financial aid, and location in making their institutional choices tend to choose community/junior college programs. These individuals are disproportionately older students, women, and minorities. Individuals who are most influenced by the institution's high placement rates tend to choose vocational-technical institutes. Individuals who are most influenced by an institution's reputation for high-quality training or because of program uniqueness tend to choose university/college occupational programs. These individuals are younger students and are more likely to have taken out loans to cover their educational expenses.

The models suggest that the instruction at vocational-technical institutes differs from either community/junior colleges or university/college programs. Students at these institutions systematically report that they spend more time in preparing for their classes, that their instructors care a lot about students, and that their course work is not any more difficult than in high school. Prior enrollment in a remedial mathematics course is highly correlated with being a student at a vocational-technical institute.

TABLE 8

ESTIMATES FROM A MODEL OF CURRENT GRADE POINT AVERAGE

Variable[a]	Estimate	t-ratio
Education and training background		
Public high school	.02	.50
College prep. curriculum	.03	1.26
Vocational curriculum	.02	.65
Prior postsec. attendance	.03	1.35
Prior postsec. degree	.08**	2.22
Developmental English	-.13***	-5.04
Developmental math	-.00	-.12
Course on how to study	-.04	-1.21
Developmental science	-.04	-1.16
Work experience		
Currently employed	-.06**	-2.14
Hourly wage ÷ 100[b]	.21	.63
Motivation		
High school grades	.29***	16.96
High school effort	-.04***	-4.50
High school extracurriculars	-.02***	-3.46
Hours/week of preparation for each course ÷ 100[b]	.43***	3.07
Postsecondary activities	.03***	2.80
Occupational goals		
Chose institution for high-quality e & t	.01	.83
Chose institution because only one w/program	.02**	2.48
Tuition		
Chose institution for cost reasons	.00	.42
Chose institution for financial aid	-.02	-1.62
Receiving financial aid	.06***	2.53
Received loan	-.08***	-3.16
Institutional placement rate		
Chose institution because of high placement	.01	1.06
Institution doesn't place as many as they advertise	-.04***	-3.02
Location		
Chose institution because of location	.00	.67
Chose institution because of friends/acquaint.	-.00	-.62

TABLE 8--Continued

Variable	Estimate	t-ratio
Personal characteristics		
Age ÷ 10[b]	.08***	5.60
Female	-.01	-.26
White	.21***	7.88
Married	.18***	7.07
Handicapped	-.14***	-3.92
Family income	-.01*	1.73
Other		
Chose institution because of guidance counselor	-.03**	-2.41
Chose institution based on catalog	-.01	-.89
Chose institution on parent's advice	-.03***	-3.86
Chose institution because of prior teacher	.01	.43
Institution is more difficult than high school	-.06***	-5.21
Faculty cares about students	.11***	6.45
Mean of dependent variable	3.361	
Sample size	2972	
Adjusted R-squared	.2330	

[a]Variables defined in table 1.
[b]Variable was scaled for presentation purposes only.

*Significant at the .10 level (two-tail test).
**Significant at the .05 level.
***Significant at the .01 level.

The findings seem to substantiate the assumed behavior of seeking information and making rational choices, particularly in the area of institutional placement rates. In every single model, it is the case that the direction of effect is opposite for the variables "chose institution for its high placement" and agreement or disagreement with the statement "institution does not place as many students as it advertises." In other words, individuals who based their decisions (at least partially) on the placement rate of the institution tended not to be disappointed with the actual rates that they evidenced. On the other hand, individuals who were disappointed in the placement rates had tended not to have been influenced by high placement rates in their choice of institution.

Business and office programs tend to be an area where students are influenced mostly by short-term economic or locational factors. Students that reported that they had been influenced by cost considerations, availability of financial aid, location, and parental advice have a greater likelihood of being in business and office programs. Furthermore, these students tended to have been in a vocational or a general curriculum in high school. The findings suggest that some of these programs are not training for high-demand occupations--the correlation with the statement that the institutions don't place as many as they advertise is very strong statistically, and further, individuals who were influenced by guidance counselors tended not to choose such programs.

The motivating factors for trade and industrial programs seem to be quite different from those for business and office. Despite the fact that the individuals in trade and industrial programs come from lower income families, are less likely to be currently employed, and are less likely to be receiving financial aid or have received a loan, they tended to be influenced by the reputation of the education. They tended not to be influenced by cost considerations or location.

Attending school on a part-time basis seems to be clearly explained by economic and/or personal reasons. The estimates show that individuals who were motivated by location, who are currently employed, and who have higher wages have tended to choose part-time status. Not surprisingly, these students have not received financial aid or taken out loans. The personal characteristics of these students indicate that they tend to be older students, women, minorities, and married. The part-time status does seem to be somewhat of a detriment to their current educational pursuits for these students; they report spending less time per week in preparation for each course. (An alternative interpretation might be that these individuals are more time-efficient.)

The results for the model of current grade point average suggest that ability (not included in the model) is an important factor. Current grades are highly related to grades in high

school and yet are negatively related to effort in high school and to number of extracurricular activities in high school. Controlling for such background factors, it appears as if sources of funds are related to current grades also. Individuals receiving financial aid, not currently employed, and without educational loans tend to have higher grades. Personal characteristics are also of importance. Older students, married students, and whites tend to have higher grades, whereas minority students and students with handicaps tend to have lower grades. Finally, it is noteworthy that students who report that their faculty care a lot about students report higher grades.

In summary, the findings of this paper support the suggested model of choice-making behavior to the extent that the data adequately represent such behavior. Additional research and data collection need to be undertaken in this area in order to improve our understanding of adult and postsecondary student choice-making behavior.

APPENDIX: STUDENT QUESTIONNAIRE

STUDENTS

Postsecondary Occupational Education Delivery:
An Examination

Conducted by:

The National Center for Research in Vocational Education
The Ohio State University

Sponsored by:

Office of Vocational and Adult Education
U.S. Department of Education

Why we need your help....

Your institution is helping in a national study of postsecondary occupational education. You have been selected as a representative student at your institution to help with that study. Your answers to the questions that follow are very important. They will help provide a basis for describing accurately the occupational education offered in postsecondary institutions and should also provide support for future program improvements.

How you can help....

On the pages that follow you will find a number of questions that relate specifically to yourself and your family, your work experience, and your educational goals and background. These questions can be answered quickly by placing an "X" or a check mark "✓" in the "[3]" next to your answer or by filling in the blank spaces provided. (See the examples shown in the box below.) Please answer all the questions as accurately as possible. Please use a pen to mark your responses.

EXAMPLE 1:

o Nationally, about what percentage of high school students dropout out each year?

[1] Between 4% and 8%
[2] Slightly less than 15%
[3] About 28%
[4] Over 50%

EXAMPLE 2:

o About what percentage of the students in your institution are:

(a) Females? 53 %
(b) Males? 47 %

When you have completed your questionnaire, (a) fold it in half, (b) staple or tape it together, and (c) return it to the institutional liaison whose name is listed below. Again, we want to note that your participation in this study is voluntary. In addition, the information you provide will be treated in the strictest confidence; no data will be associated with the name of an individual or institution in any project-related reports or other form of information dissemination. All data will be aggregated across individuals and institutions and described only at the national level.

INSTITUTIONAL LIAISON

Name:_____
Address:_____

1. Name: _____

2. Institution: _____

3. What is (are) your major program(s): _____
_____

Background

4. When were you born? _____/_____
month year

5. What is your sex?
[1] Female
[2] Male

6. What is your ethnic background?

[1] American Indian or Alaskan Native
[2] Asian American or Pacific Islander
[3] Black, not of Hispanic origin
[4] Hispanic
[5] White, not of Hispanic origin
[6] Other

7. Which of the following best describes the place where you live?

[1] A rural or farming community
[2] A small city of less than 50,000 people that is not a suburb
[3] A medium-sized city (50,000 - 100,000)
[4] A suburb of a medium-sized city
[5] A large city (100,000 - 500,000)
[6] A suburb of a large city
[7] A very large city (over 500,000)
[8] A suburb of a very large city
[9] A military base or station

8. What is your marital status?

[1] Married, spouse present
[2] Married, spouse absent in military or other reasons (not specified)
[3] Widowed
[4] Divorced
[5] Separated
[6] Never married

9. How many children do you have and what are their ages?

[1] None
[2] One ---> Age _____
[3] Two ---> Ages _____ and _____
[4] 3-4 ---> Oldest age _____; youngest _____
[5] 5+ ---> Oldest age _____; youngest _____

10. Do you live independently of your parents (or guardians)?

[1] Yes
[2] No

11. Are you financially independent of your parents (or guardians)?

[1] Yes
[2] No

Educational Background

12. What type of school(s) did you attend for grades 1-8 and in high school? **(MARK THE RESPONSE THAT IS TRUE FOR MOST OF THE TIME YOU WERE IN THESE GRADES, IF YOU ATTENDED MORE THAN ONE TYPE.)**

(a) Elementary and Junior High/ Middle School (Grades 1-8)
[1] Public
[2] Private-religious affiliation
[3] Private-other

(b) High School (Grades 9-12)
[1] Public
[2] Private-religious affiliation
[3] Private-other

13. When did you graduate from high school or get your GED equivalent?

_____/_____
month year

14. Which of the following best describes your high school program?

[1] General
[2] Academic or college prep
[3] Vocational (Occupational) preparation -->
[1] Agriculture
[2] Business/Office
[3] Distribution/Marketing
[4] Health
[5] Home economics
[6] Technical
[7] Trade or industrial

15. Which of the following best describes your grades in high school?

[1] Mostly A (a numerical average of 90-100)
[2] About half A and half B (85-89)
[3] Mostly B (80-84)
[4] About half B and half C (75-79)
[5] Mostly C (70-74)
[6] About half C and half D (65-69)
[7] Mostly D (60-64)
[8] Mostly below D (below 60)

16. In high school, approximately how much time did you spent on homework per week?

[1] No homework was ever assigned
[2] I had homework assigned, but I usually didn't do it
[3] Less than 1 hour per week
[4] Between 1 and 3 hours per week
[5] 3-5 hours per week (1/2 - 1 hour per night)
[6] 5-10 hours per week (1 - 2 hours per night)
[7] 11-15 hours per week (2 - 3 hours per night)
[8] 15+ hours

17. In high school, did you participate in any of the following type of activities in or out of school? **(ANSWER ALL ITEMS)**

	Did not participate	Participated actively, but not as officer or leader	Officer or leader
(a) Varsity athletic teams	[1]	[2]	[3]
(b) Other athletic teams	[1]	[2]	[3]
(c) Cheer leading, pep club, majorettes	[1]	[2]	[3]
(d) Drama	[1]	[2]	[3]
(e) Band, orchestra, chorus, or dance	[1]	[2]	[3]
(f) Hobby clubs (photography, electronics, crafts) or school subject clubs (science, business, math)	[1]	[2]	[3]
(g) Honorary clubs, such as National Honor Society	[1]	[2]	[3]
(h) School newspaper, magazine, yearbook	[1]	[2]	[3]
(i) Student council, student government, political club	[1]	[2]	[3]
(j) Vocational education clubs (FHA, FTA, FFA, DECA, FBLA, VICA)	[1]	[2]	[3]
(k) Youth organizations in the community (Scouts, Y) or church activities	[1]	[2]	[3]
(l) Junior Achievement	[1]	[2]	[3]

18. Have you taken any of the following tests?

a) College Board SAT test
[1] Yes ----> Combined score:
[2] No
[1] 400 - 600
[2] 600 - 800
[3] 800 - 1000
[4] 1000 - 1200
[5] 1200+

b) ACT test
[1] Yes ----> Score:
[2] No
[1] less than 15
[2] 15 - 19
[3] 20 - 24
[4] 25 - 30
[5] More than 30

Current Education

19. For how many grading periods (quarters, semesters, etc.) have you attended this institution not counting this current one? _____

20. Please rank the four most important factors that influenced you to choose this institution. **(The most important factor would be 1, the next most important 2, and so forth. Do not repeat rankings. If there are fewer than 4 factors, then only rank the factors that were important.)**

(a) Guidance counselor in prior school _____
(b) Catalog's description _____
(c) Parents advice _____
(d) Teacher in prior school _____
(e) Location _____
(f) Friend or acquaintance recommendation _____
(g) Reputation of the institution for providing high quality education and training _____
(h) Reputation of the institution for high placement rates _____
(i) Cost considerations _____
(j) Financial aid _____
(k) It is the only institution in my state that offers the program I'm interested in _____

21. Does this institution consider you a full or a part-time student?

[1] Full time
[2] Part-time
[3] Don't know

22. How many credit hours are you enrolled in during this grading period?
_____ credit hours

23. How many credit hours are you planning to enroll in for the entire year? (September 1, 1986 - August 31, 1987) _____ credit hours

24. a) What is the cost per credit hour for the courses you are currently taking? $_____._____

b) What is the <u>total</u> cost for course fees over and above the charges per credit hour? $_____._____

25. Did you receive a loan to cover any of the costs for this year's educational expenses?

[1] Yes
[2] No

26. Did you receive any form of financial aid for this school year such as a scholarship, grant, fellowship, assistantship, tuition waiver, or veteran's educational benefits? **(MARK ALL THAT APPLY)**

[9] No (Go to Question 27)

[1] Yes, a scholarship
[2] Yes, a grant
[3] Yes, a fellowship
[4] Yes, an assistantship
[5] Yes, a tuition waiver
[6] Yes, veterans' benefits
[7] Yes, JTPA/PIC
[8] Yes, other (specify: _____)

27. Have you taken any of the following courses at this institution? **(ANSWER ALL ITEMS)**

	Yes	No
a) Basic English (sometimes called developmental or essential)	[1]	[2]
b) Basic Mathematics (sometimes called developmental or essential)	[1]	[2]
c) A course on how to study	[1]	[2]
d) Basic science (sometimes called pre-tech)	[1]	[2]
e) Career education (job knowledge, job seeking skills, career awareness	[1]	[2]

28. Which of the following best describes your grades in this institution?

[1] Mostly A (a numerical average of 90-100)
[2] About half A and half B (85-89)
[3] Mostly B (80-84)
[4] About half B and half C (75-79)

[5] Mostly C (70-74)
[6] About half C and half D (65-69)
[7] Mostly D (60-64)
[8] Mostly below D (below 60)

29. About how much time do you spend preparing for _____ (course name) each week? _____ hours

30. Is the time that you spend on this course more, less, or about the same as time spent on your other courses?

[1] More
[2] About the same
[3] Less
[4] Don't know

31. What type of degree are you currently working toward and what is the highest type of degree you eventually plan to get?

Working on	Plan to get
[1] Vocational certificate	[1] Vocational certificate
[2] Associate's degree	[2] Associate's degree
[3] Bachelor's degree	[3] Bachelor's degree
[4] Other (Please specify: _____)	[4] Master's degree
	[5] Ph.D.
[5] Not working toward a degree	[6] Other: (_____)
	[7] Not working toward a degree

32. Do you participate in any of the following types of activities in or out of school? **(ANSWER ALL ITEMS)**

	Do not participate	Participate actively, but not as officer or leader	Officer or leader
a) Varsity athletic teams	[1]	[2]	[3]
b) Other athletic teams	[1]	[2]	[3]
c) Cheerleading, pep club, majorettes	[1]	[2]	[3]
d) Drama	[1]	[2]	[3]
e) Band, orchestra, chorus, or dance	[1]	[2]	[3]
f) Hobby clubs (photography, electronics, crafts)	[1]	[2]	[3]
g) Honorary clubs or societies	[1]	[2]	[3]
h) School newspaper, magazine, yearbook	[1]	[2]	[3]
i) Student government	[1]	[2]	[3]

33. Do you participate in an internship or cooperative education program that involves employment off-campus?

[1] Yes — How many hours per week do you work as part of the program? ____ hours
[2] No (Go to question 35)

34. Do you receive credit toward a degree for co-op work? [1] Yes [2] No

35. An individualized course is one that you take on your own at your own speed, perhaps with assistance of a microcomputer. How many individualized courses have you taken in this institution?

_____ courses
[99] None

36. Do you agree or disagree with the following statements?

	Strongly Disagree	Moderately Disagree	Moderately Agree	Strongly Agree
a) The course work in this institution is more difficult than high school.	[1]	[2]	[3]	[4]
b) On average, the instructors seem to care a lot about students.	[1]	[2]	[3]	[4]
c) The students here have a lot of school spirit.	[1]	[2]	[3]	[4]
d) I had no idea about how hard the courses would be when I entered.	[1]	[2]	[3]	[4]
e) The library facilities at this institution are good.	[1]	[2]	[3]	[4]
f) The equipment at this institution is good.	[1]	[2]	[3]	[4]
g) This institution does not place as many students in jobs after graduation as they advertise.	[1]	[2]	[3]	[4]

37. Do you feel that you will complete the program that you are in?

[1] Yes ---> (Go to question 38)
No, because **(Mark the best answer)**
[2] I will probably transfer to another program in this institution
[3] I will probably transfer to another institution
[4] I will probably stop attending because the work is too hard
[5] I will probably stop attending for financial reasons
[6] I will probably stop attending because English is a second language and I am having too much difficulty
[7] I will probably get a job after I complete the program
[8] I will probably stop attending for other reasons
(Specify: _____)

Other Colleges

38. Have you attended any college or institution after high school prior to or while you were enrolled here?

[1] Yes
[2] No (Go to question 44)

39. What was the name and address of the most recent postsecondary institution you attended?

_____
_____
_____

40. Dates of attendance of most recent enrollment prior to this institution?

From _____/_____ to _____/_____
month year month year

41. What was/is your major at that institution? _____
[99] Undecided, no major

42. Did you receive a degree? [1] Yes
[2] No (Go to question 44)

43. Which degree? [1] Vocational certificate [4] Master's degree
[2] Associate degree [5] Ph.D.
[3] Bachelor's degree [6] Other: _____

Military

44. Have you served or are you currently serving in the Armed Forces, including the National Guard or Reserves? [1] Yes
[2] No (Go to question 49)

45. What were the dates of your service? From _____/_____ to
month year
_____/_____. **(Enter current date if still serving.)**
month year

46. (a) What is the name of the job you were trained for?

_____

(b) What were/are the main activities and duties?

_____

47. How many weeks of training (not counting basic) did you complete?

Formal School Training	On the Job Training
___ ___ weeks [99] None	___ ___ weeks [99] None

48. How related was your training to the course of study you are now pursuing?

[1] Not at all related
[2] Somewhat related
[3] Related
[4] Very related

Employment History

49. Are you currently employed for pay?
[1] Yes
[2] No (Go to question 59)

50. When did you start working at this job? _____/_____
month year

51. What is your occupation/job duties?

_____

52. Name of employer: _____
Type of industry: _____

53. How many hours did you work last week? _____ hours

54. What is you hourly wage or salary? $_____ per [1] hour [3] month
(Include tips, bonuses, commission) [2] week [4] year

55. How related is your job to the course of study you are pursuing?

[1] Not at all related
[2] Somewhat related
[3] Related
[4] Very related

56. How did you find out about this job?

[1] Responded to an ad in the newspaper
Referred by:
[2] Friend or family member
[3] State employment agency
[4] High school teacher or counselor
[5] College/institution staff member
[6] Listed in placement office
[7] Other: _____

57. Does your employer know that you are attending school?
[1] Yes
[2] No (Go to item 59)

58. Does your employer typically allow you to adjust your work schedule, hours, or duties to accomodate your school work or schedule?
[1] Yes
[2] No

5 MOS' RECENT PRIOR JOBS

	a] Recruitment Source	b] Starting Date	c] Ending Date	d] Occupation or Job Duties	e] Name of Firm	f] Average Hours/Week	g] Relevant Current Training	h] Last [or current wage or salary]
59. Most recent job [not including job described in question 49]	[1] Newspaper ad [2] School placement office [3] State employment office [4] Friend/ acquaintance [5] Teacher/ Counselor [6] Other	____/____	____/____	_____ _____ _____	_____	During school _____ Summers _____	[1] Yes [2] No	$_____ per [1] hour [2] week [3] month [4] year
60. Second most recent job	[1] Newspaper ad [2] School placement office [3] State employment office [4] Friend/ acquaintance [5] Teacher/ Counselor [6] Other	____/____	____/____	_____ _____ _____	_____	During school _____ Summers _____	[1] Yes [2] No	$_____ per [1] hour [2] week [3] month [4] year
61. Third most recent job	[1] Newspaper ad [2] School placement office [3] State employment office [4] Friend/ acquaintance [5] Teacher/ Counselor [6] Other	____/____	____/____	_____ _____ _____	_____	During school _____ Summers _____	[1] Yes [2] No	$_____ per [1] hour [2] week [3] month [4] year
62. Fourth most recent job	[1] Newspaper ad [2] School placement office [3] State employment office [4] Friend/ acquaintance [5] Teacher/ Counselor [6] Other	____/____	____/____	_____ _____ _____	_____	During school _____ Summers _____	[1] Yes [2] No	$_____ per [1] hour [2] week [3] month [4] year
63. Fifth most recent job	[1] Newspaper ad [2] School placement office [3] State employment office [4] Friend/ acquaintance [5] Teacher/ Counselor [6] Other	____/____	____/____	_____ _____	_____	During school _____ Summers _____		$_____ per [1] hour [2] week [3] month [4] year

Government-Sponsored Training

64. Besides the jobs you just listed (or earlier jobs), have you received skill training from a government-sponsored program such as CETA, JTPA, or the Job Corps, from a labor organization, or from a community-based organization such as the Urban League, an action agency, etc. **(MARK ALL THAT APPLY)**

[1] No (Go to question 67)
[2] Yes, from CETA or JTPA
[3] Yes, from a labor organization
[4] Yes, from a community-based organization

65. What is/are the name(s) of the agencies that sponsored this training?

_____
_____

66. For the program that you attended last (most recently)--

a) Did you complete the program?
[1] Yes
[2] No, I am still enrolled
[3] No

b) Dates of enrollment From _____/_____ to _____/_____
month year month year

c) What occupation or job were you being trained for? _____

d) Did this program provide you classroom or individualized instruction in reading, writing, or arithmetic?
[1] Yes
[2] No

e) How related was the training to the program or course of study you are currently pursuing?

[1] Not at all related
[2] Somewhat related
[3] Related
[4] Very related

67. Do you have any of the following conditions? **(MARK ALL THAT APPLY)**

[1] Specific learning disability
[2] Visual handicap (not correctable)
[3] Hard of hearing
[4] Deafness
[5] Speech disability
[6] Orthopedic handicap
[7] Other physical disability or handicap
Please describe:_____
_____
[8] None of these conditions

68. Families may be divided into 8 groups according to how much income they receive in a year. **(MARK THE INCOME RANGE THAT APPLIES TO YOUR FAMILY.)**

[1] $7999 or less
[2] $8000 - 11,999
[3] $12,000 - 15,999
[4] $16,000 - 19,999
[5] $20,000 - 24,999
[6] $25,000 - 34,999
[7] $35,000 - 49,999
[8] $50,000+

LOCATING INFORMATION

You have completed the questionnaire. Thank you very much. We may be contacting some of our respondents in a year or two, so we would like to be certain that we have your correct name, address and phone number. We would also like to have the name, address, and phone number of a relative or individual who would be most likely to know where you are.

69. Your Name (Please Print)

|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|/|_|_|_|_|_|_|_|_|_|_|_|_|_|/|_|

(Last) (First) (M.I.)

70. Your Address

|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|